

Georgia Southern University Biodiesel Research – Statesboro GA

**Proposed Recipient:** Georgia Southern University

**Address of Recipient:** PO Box 8158, Statesboro, Georgia 30460

**Amount of Request:** \$423,311

**Explanation of Request**

**Purpose:** GSU plans to produce automotive grade fuel by two methods as an integral part of renewable energy program by esterification and fermentation & distillation. By esterification a defined feedstock of crude bio-oil obtained from waste oil, or non food biomass sources: seeds or invasive species by mechanical (grinding) and chemical extraction will be esterified. The purity of biodiesel is high and the energy involved in the process much lower than by pyrolysis as in the UGA case. The fermentation uses microorganisms and will be an accelerated natural process and by distillation the alcohol content will be enhanced. By this method bio-ethanol automotive grade will be obtained directly.

**Why is it a good use of Taxpayer funds:** The development of alternative fuel sources and engines that can more efficiently accept renewable fuels is a federal priority. The research performed at GSU's Renewable Energy Lab will address both federal environmental issues and reduce our nation's dependency on foreign oil, while developing practical alternatives that can be adopted by industry.